AMENDMENTS TO THE CLAIMS

Claim 1 (currently amended). An immunoglobulin molecule or a fragment thereof deriving from a parental anti-idiotype anti-CEA antibody and comprising constant regions from human origin and synthetically designed variable regions comprising one or more sequence tracts of more than 4 consecutive amino acid residues deriving from human tumor antigen CEA (carcinoembryonic antigen; SEQ ID NO: 3).

Claim 2 (original). An immunoglobulin molecule according to claim 1, wherein one of said sequence tracts comprises 5 – 20 consecutive amino acid residues.

Claim 3 (currently amended). An immunoglobulin molecule according to claim 1 [[or 2]], wherein at least one of said sequence tracts is a component of a complementarity determining region (CDR) of the heavy and / or light chain of said immunoglobulin or overlaps with adjacent residues of a framework region adjacent to said CDR.

Claim 4 (original). An immunoglobulin molecule of claim 3, wherein said component forms 30 to 100% of the amino acid residues of said CDR.

Claim 5 (currently amended). An immunoglobulin molecule according to claim 3 [[or 4]], wherein said CDR is a CDR of the heavy chain of said immunoglobulin.

Claim 6 (currently amended). An immunoglobulin molecule according claim 3, wherein at least two CDRs of each heavy and [[/ or]] light chain consist completely of CEA-derived sequence tracts.

Claim 7 (currently amended). An immunoglobulin molecule according to ~~any of the claims 1 to 6~~ claim 1, wherein said parental anti-idiotype anti-CEA antibody is mouse antibody 708.

Claim 8 (currently amended). An immunoglobulin molecule according to ~~any of the claims 1 to 7~~ claim 1, comprising within the variable regions additionally sequence tracts of 5 to 25 consecutive amino acid residues deriving from human CD55 (SEQ ID NO: 4) antigen or the hypervariable regions of an anti-idotype anti-CD55 antibody.

Claim 9 (original). An immunoglobulin molecule of claim 8, wherein said anti-idotype anti-CD55 antibody is mouse antibody 105AD7.

Claim 10 (currently amended). An immunoglobulin molecule according to ~~any of the claims 1 to 9~~ claim 1, wherein within the variable regions additionally potential MHC class II epitopes, which do not contribute to an immune response to CEA positive human cancer cells, have been removed by amino acid substitutions.

Claim 11 (currently amended). An immunoglobulin molecule according to ~~any of the claims 1 to 10~~ claim 1, comprising within the variable regions additionally CEA derived sequence tracts from SEQ ID NO: 3 which are MHC class I epitopes.

Claim 12 (currently amended). An immunoglobulin molecule according to claim 11, wherein said CEA- derived sequence tracts are TLLSVTRNDV (SEQ IS NO: 7) and YLSGANLNL (SEQ IS NO: 8).

Claim 13 (currently amended). An immunoglobulin molecule of claim 11 ~~or 12~~, wherein said CEA derived sequence tracts are part of or form completely one ore more of the CDRs of the light chain of said immunoglobulin.

Claim 14 (currently amended). An immunoglobulin molecule according to ~~any of the claims 1 to 12~~ claim 1, comprising within the variable regions additionally CEA derived sequence tracts from SEQ ID NO: 3 which are MHC class II epitopes contribute to an immune response directed to CEA positive human cancer cells.

Claim 15 (currently amended). An immunoglobulin molecule according to ~~any of the claims 1 to 13~~ claim 1, comprising a variable heavy chain selected from any of the sequences as depicted in Figures 4 to 7.

Claim 16 (currently amended). An immunoglobulin molecule according to ~~any of the claims 1 to 13~~ claim 1, comprising a variable light chain selected from any of the sequences as depicted in Figures 8 and 9.

Claim 17 (currently amended). An immunoglobulin molecule according to ~~any of the claims 1 to 13~~ claim 1, comprising a heavy chain selected from any of the sequences as depicted in Figures 4 to 7 and a light chain selected from any of the sequences as depicted in Figures 8 and 9.

Claim 18 (currently amended). An immunoglobulin molecule according to ~~any of the claims 1 to 11~~ claim 1, wherein the variable heavy and / or light chain comprises one or more sequence tracts in identity with the sequence tracts selected from the group:

(i) 345-354 of ~~human CEA~~ SEQ ID NO: 3;

(ii) 387-396 of ~~human CEA~~ SEQ ID NO: 3;

(iii) 571-579 of ~~human CEA~~ SEQ ID NO: 3;

(iv) 629-645 of ~~human CEA~~ SEQ ID NO: 3;

(v) 148-167 of ~~human CD55~~ SEQ ID NO: 4.

Claim 19 (currently amended). A pharmaceutical composition comprising an immunoglobulin molecule of ~~any of the claims 1 to 18~~ claim 1 in an biologically effective amount, an adjuvant, and optionally a pharmaceutically acceptable carrier, diluent or excipient.

Claims 20-21 (cancelled).

Claim 22 (currently amended). A method for the production of a vaccine molecule based on a synthetically designed immunoglobulin molecule suitable for the treatment of a human individual suffering from a CEA (carcinoembryonic antigen) positive solid or metastasising ~~tumour~~ tumor, said method comprising the following steps:
(i) selecting a non-human anti-idiotype anti-CEA antibody,
(ii) replacing the non-human constant regions by [[a]] human constant regions, and
(iii) replacing partially or completely one or more of the hypervariable regions (CDRs), with sequence tracts deriving from CEA (SEQ ID NO: 3), whereby optionally, framework residues adjacent to said CDRs ~~may be~~ are included.

Claim 23 (currently amended). [[A]] The method of claim 22, comprising additionally one or more of the steps selected from the group consisting of:
(iv) replacing sequence tracts within the variable regions with tracts deriving from CD55 antigen (SEQ ID NO: 4) or the hypervariable regions of an anti-idiotype anti-CD55 antibody,
(v) replacing sequence tracts within the variable regions with tracts which are MHC class I and / or MHC class II epitopes responding to CEA positive human cancer cells, and
(vi) removing within the variable regions potential MHC class II epitopes, which do not contribute to an immune response to CEA positive human cancer cells.

Claim 24 (currently amended). [[A]] The method of claim 22 ~~or 23~~, wherein said non-human anti-idiotype anti-CEA antibody is mouse antibody 708.

Claim 25 (new). A method of treating a tumor in a human patient comprising administering an anti-tumor effective amount of an immunoglobulin molecule of claim 1 to a human patient having a solid or metastasizing tumor.

Claim 26 (new). A method of stimulating T-cells against a tumor in a human patient comprising administering a T-cell stimulating amount of an immunoglobulin molecule of claim 1 to a human patient having a solid or metastasizing tumor.